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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,877	11/07/2001	Ricardo J. Motta	1039.017	7967

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MENDELSON AND ASSOCIATES PC  
1515 MARKET STREET  
SUITE 715  
PHILADELPHIA, PA 19102

EXAMINER

SANDERS, ALLYSON N

ART UNIT PAPER NUMBER

2876

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

10/045,877

Applicant(s)

MOTTA ET AL.

Examiner

Allyson N Sanders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1, 2, 8, 9 and 15-17 is/are rejected.
- 7) ☐ Claim(s) 3-8, 10-14 and 18-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Amendment***

1. Receipt is acknowledged of the Amendment filed May 23, 2003.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 2, 8, 9, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Heller et al (6,293,465).

Heller et al teaches the following in regards to claims 1, 2, 8, 9, and 15-17:

“A single integrated circuit having an image sensor for outputting signals representative of input light; a programmable non-volatile memory for storing security information; a controller unit for interfacing with the programmable non-volatile memory

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and accessing the security information; and an input/output port for communicating with a control and post-processing circuit." (Abstract).

"FIG. 2 illustrates integrated circuit imaging device 10 formed from a CMOS process on a single chip having an image sensor array 12, a programmable memory 14, a controller unit 16 and an input/output (I/O) port 18. Sensor array 12 includes a grid of individual CMOS light sensing elements configured to output analog signals representative of an amount of light intensity illuminating the elements to controller 16 along an analog signal connection bus 20. Depending upon the configuration, analog signals from elements of array 12 may be output simultaneously in parallel, output one at a time in series, or output row-by-row or column-by-column, etc. Controller unit 16 includes analog-to-digital (A/D) circuitry, not separately shown, for converting analog signals received from sensor array 12 to digital signals. In addition, controller unit 16 contains circuitry for programming programmable memory 14 and circuitry used for operating on the output of the digital signals. The digital signals are routed along a digital bus line 22 to digital I/O port 18 for output. Controller unit 16, depending upon the configuration, can perform one of a wide variety of image processing operations including, for example, pattern recognition operations, filtering operations, Fourier transform operations, and the like." (Cols. 3 and 4, lines 54-9).

"Referring again to FIG. 2, programmable memory 14 includes a storage location for defective pixel location information 32. In a preferred embodiment, defective pixel location information 32 contains a table of the coordinates of the defective pixels located in sensor array 12. As described below, sensor array 12 is tested during manufacture

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to determine the defective pixels located therein, so as to determine the location of all defective pixels located in sensor array 12." (Col. 7, lines 49-57).

"FIG. 6 is a flowchart summarizing a method of operating integrated circuit imaging device 10 in capturing an image and providing defective pixel correction. Initially, in step 80, system controller 122 accesses defective pixel location information 32 to read out the stored coordinates of the defective pixels in sensor array 12. As described above, the coordinates are store in a tabular format. In one embodiment, the information is compressed to save space in programmable memory 14. Thus, the information must be decompressed when it is retrieved from programmable memory 14. After the information is retrieved and decompressed, operation will continue with step 82." (Col. 8, lines 43-54).

#### ***Allowable Subject Matter***

4. Claims 3-7, 10-14, and 18-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's for allowance: Although Heller et al teaches an imaging system comprising an image sensor, a memory, and a processor, and furthermore teaches the sensor and the memory being implemented in a single integrated circuit, the above identified prior art of record, taken alone, or in combination with any other prior art, fails to teach or fairly suggest the specific features which are present in the dependent claims listed above. These features consist of the following: the imaging system described in claim 1 wherein the diagnostic mode enables the

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imaging system to be tested using a testing system. The testing system includes the following components, a test controller, different from the processor, which generates instructions for controlling test operations of the testing system; the testing system provides a set of light stimuli for the image sensor in response to the instructions; and the processor generates test results based on the digital image data indicating whether the image sensor is defective. Prior art additionally fails to teach the following regarding the imaging system taught above: prior to operating the image sensor in the normal operating mode, no physical modifications are made to the image sensor in response to identifying one or more defective pixels in the image sensor during the diagnostic mode and not performing diagnostic testing on the image sensor to identify one or more defective pixels in the image sensor prior to assembling the image sensor into a packaged image sensor. Moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

5. Applicant's arguments filed May 23, 2003 with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. The Heller et al reference teaches an imaging system comprising an image sensor, a memory, and a

processor, wherein the image sensor and the memory are implemented in a single integrated circuit and wherein the processor analyzes the digital image data to determine if the image sensor is defective.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ackley (6,478,223).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson Sanders* whose telephone number is (703) 305-5779. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (703) 305-3503. The fax phone number for this Group is (703) 308-7722, (703) 308-7724, or (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**allyson.sanders@uspto.gov**].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Allyson Sanders  
Patent Examiner  
Art Unit 2876  
August 8, 2003



THIEN M. LE  
PRIMARY EXAMINER